



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/085,820	05/28/1998	HAI U. WANG	CIT98-01PA	7434

7590

12/19/2001

PATRICIA GRANAHAH
HAMILTON BROOK SMITH & REYNOLDS
TOW MILITIA DRIVE
LEXINGTON, MA 021737499

EXAMINER

ANDRES, JANET L

21

ART UNIT	PAPER NUMBER
----------	--------------

1646

DATE MAILED: 12/19/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/085,820

Applicant(s)

WANG ET AL.

Examiner

Janet L Andres

Art Unit

1646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-7, 10-13, 15-21, 42, 43 and 72-75 is/are pending in the application.
- 4a) Of the above claim(s) 4, 6, 11, 13, 15-19, 78 and 84 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3, 5, 7, 10, 12, 42, 43, 72-77, 79-81, 85 is/are rejected.
- 7) ☒ Claim(s) 82, 83 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

RESPONSE TO AMENDMENT

1. Applicant's amendment filed 5 October 2001 in paper no. 20 is acknowledged. Claims 3-7, 10-13, 15-21, 42, 43, and 72-75 are pending in this application. Claims 4, 6, 11, 13, 15-19, and new claim 78 and 84 are withdrawn from consideration as drawn to a non-elected invention, since generic claims encompassing these species have not been allowed.

Claim Rejections/Objections Withdrawn

2. The rejections of claims 1, 2, 8, 9, and 41 under 35 U.S.C. 112, first paragraph, as lacking enablement and written description are withdrawn in response to Applicant's cancellation of these claims.

3. The rejection of claims 1-3, 5, and 7 under 35 U.S.C. 112, second paragraph, is withdrawn in response to Applicant's amendment.

4. The objection to claims 10, 12, 42, and 43 is withdrawn in response to Applicant's amendment.

5. The warning with regard to claims 3, 7, 10, and 12 as being duplicate claims is withdrawn in response to Applicant's cancellation of claims 67, 68, 69, and 71.

Claim Rejections Maintained/New Grounds of Rejection

6. The provisional double patenting rejection of claims 3, 5, 7, 10, 12, 42, 43, and 72 is maintained of record. This rejection is newly applied to claim 80, which is identical in scope to claim 44 of 09/687652, and claim 85, which is identical in scope to claim 43 of 09/687652.

7. The provisional nonstatutory double patenting rejection of claims 73-75 is maintained of record. This rejection is newly applied to new claims 76 and 79. New claim 76 is obvious over claim 3 of 09/687652, which is drawn to means of altering angiogenesis by affecting eph/ephrin

Art Unit: 1646

interactions, since it is drawn to means of achieving this effect by promoting the interaction.

New claim 79 is obvious over claim 10 of 09/687652, since the use of an antibody is an art-standard method of achieving a specific interaction with a molecule, as required in claim 10.

8. Claims 3, 5, 42, 73, 76, 77, 81, and 85 are newly rejected under 35 U.S.C. 112, first paragraph, as lacking enablement commensurate with the scope of the claims. These claims are drawn to methods of altering angiogenesis by affecting ephrin family ligands or eph family receptors. While one of skill in the art could, given the teachings of the specification, identify artery-specific ephrin family ligands and vein-specific eph family receptors, the skilled artisan could not predictably use them as broadly claimed. The claims require not only that the molecules be expressed specifically, but also that they be involved in angiogenesis. Otherwise agonists and antagonists would not be expected to alter angiogenesis, as claimed. Applicant has not, however, provided any guidance to indicate that any eph or ephrin family members other than ephrin B4 and eph B2 would affect angiogenesis. Differential expression, if observed, would not be predictive of such a function. The eph/ephrin families are involved in many different processes and their precise functions are not clear (Gale et al., cited by Applicant). They are not potent mitogens but are involved in neuronal guidance and thought to direct cells by repulsive interactions (Gale et al., p. 1059). Thus, while one of skill in the art might, given the differential expression of ephrin B4 and eph B2, be able to identify other differentially expressed pairs with an expectation of success, one of skill would not predict that such pairs would be involved in angiogenesis, or that affecting them would affect angiogenesis. Without further guidance indicating that differentially expressed eph/ephrin pairs could, if identified, be

Art Unit: 1646

predictably be used as claimed, it would require undue experimentation for the skilled artisan to use the invention as broadly claimed.

CLAIMS 82 AND 83 ARE OBJECTED TO AS DEPENDING FROM A REJECTED CLAIM BUT ARE OTHERWISE ALLOWABLE. CLAIMS 3, 5, 7, 10, 12, 42, 43, 72-77, 79-81, AND 85 ARE REJECTED.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janet Andres, Ph.D., whose telephone number is (703) 305-0557. The examiner can normally be reached on Monday through Friday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, Ph.D., can be reached at (703) 308-6564. The fax phone number for this group is (703) 305-3014 or (703) 308-4242.

Communications via internet mail regarding this application, other than those under U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to yvonne.eyler@uspto.gov.

All Internet email communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark Office on February 25, 1997 at 1195 OG 89.

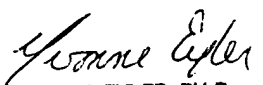
Application/Control Number: 09/085,820

Page 5

Art Unit: 1646

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Janet Andres, Ph.D.
December 6, 2001


YVONNE EYLER, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

)